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Professional Preparation

B.S.	Chemical Engineering, Howard University, 1983
M.S.	Chemical Engineering, Rensselaer Polytechnic Institute, 1985
Ph.D.	Engineering & Public Policy, Carnegie Mellon University, 1996

Appointments

2008 - Present	Director, University of Virginia Center for Small Infrastructure & Development
2006 - 2007	AAAS Science and Policy Fellow, US Environmental Protection Agency: Office of Research and Development: National Center for Environmental Research
2004-present	Associate Professor, Systems Engineering, University of Virginia
2004-present	Associate Professor, Civil Engineering, University of Virginia
1997-2004	Assistant Professor, Systems Engineering, University of Virginia (UVA)
1996-1997	Postdoctoral Fellow, Green Design Institute, Carnegie Mellon University
1995-1996	Founding Director, *Development In Action*, International Assistance NGO
1994-1995	Warren Weaver Fellow, Global Environment Division, Rockefeller Foundation
1990-1994	Graduate Research Assistant, Engineering & Public Policy, Carnegie Mellon U.
1985-1990	Instructor, Science Department, State University of New York, Maritime College
1985-1987	Instructor, Remedial Math, College of New Rochelle, Rosa Parks Harlem Campus

5 Publications Most Closely Related to the Proposed Project

- Louis, G., L. Magpili, and C.A. Pinto, "Risk Based Sequential Resource Allocation of Competing Sanitation Investments," *International Journal of Environment and Waste Management*, In Print.
- Rogers, J., and G. Louis, "A Method for the Comparative Performance Assessment and Evaluation of Consolidating Community Water Systems as a Regional Water System," *ASCE Journal of Infrastructure Systems*, V. 13, N. 4 December 2007, 280-286
- Rogers, J., and G. Louis, "A Financial Resource Allocation Model for Regional Water Systems," *International Transactions in Operations Research (ITOR)*, 14 (2007). 25-37.
- Louis, G., and J. Shih, "A Flexible Inventory Model for Municipal Solid Waste Recycling," *Socio-Economic Planning Sciences*, 41 (2007). 61-89.
- Louis, G., L. Magpili, and C.A. Pinto, "Multi-Criteria Decision Making and Composting of Waste in the Municipality of Bacoor in the Philippines," *International Journal of Environmental Technology and Management, Special Issue on Composting for Municipal Solid Waste*, V.7. I. 3|4. 2007. PP 351-368

5 Other Significant Publications

- Rogers, J., and G. Louis, "Risk and Opportunity in Upgrading the US Drinking Water Infrastructure System," *Journal of Environmental Management*, V. 87. 2008. PP. 26-36.
- Louis, G., L. Magpili, "A Life-Cycle Capacity-Based Approach to Allocating Investments in Municipal Sanitation Infrastructure, "*Structure & Infrastructure Engineering*, V3,N2. 2007, 121-131.
- Rogers, J., and G. Louis, "A Risk Based Asset Management Tool for US Water Infrastructure Systems," *Water Asset Management International*, V.2, N.4., December 2006. Pp. 4-11.
- Rogers, J., and G. Louis, "A Standardized Performance Assessment and Evaluation Model for Community Water Services," *Journal American Water Works Association*, Oct. 2005. Pp. 76-86.
- Louis, G. "A Historical Context for Municipal Solid Waste Management in the United States (1850-1980)," *Waste Management & Research*, 2004. V22, Pp. 306-322.

Synergistic Activities

Director of the SID Center for Small Infrastructure & Development at the University of Virginia:
The SID Center is a center of excellence for research, education, and outreach on the acquisition, implementation, and management of appropriate technology and management systems for sustained access to infrastructure-based services in developing communities. The main focus is on water and sanitation, and household energy systems.

Director of the Design for Development (DfD) Lab:
The DfD lab trains undergraduate students in the applied skills necessary to adapt successful technologies for water, sanitation, and household energy to work in the resource context of developing communities. The aim is to ensure that students on development projects are equipped to serve as teachers and capacity builders in the communities that host them.

American Association for the Advancement of Science (AAAS) Energy, Environment, and Natural Resources (EENR) Fellow (2006-2007):
Louis was an AAAS-EENR Science and Policy Fellow at the EPA National Center for Environmental Research. As a fellow Louis helped to develop EPA's "Sustainable Communities," research program, which seeks to characterize and mitigate the impacts of civil infrastructure on natural resources, particularly in rural areas affected by urban sprawl.

Lead Investigator & Course Instructor, Ethics Education for Scientists and Engineers (2005-2008):
Louis collaborated with Mike Gorman and Nathan Swami in developing a new graduate course for educating engineering and science students on ethics and professionalism in the research and practice of science and engineering. The project was funded by NSF's EESE program, and included students from across the university working on emerging technologies and in developing communities.

Councilor, Society for Risk Analysis (SRA) (2005-2008):
Louis was chair of the Education ad-hoc committee (2007-2008), and was a member of the planning committee of the Second World Congress on Risk in Guadalajara, Mexico (June 2008). He chaired the session on "Public health priorities: infectious disease & safe drinking water," and organized the mini symposium on "Risk and Development."

Director, Heim Fellowship for Environmental Systems Engineering, UVA (2004-Present):
This program was developed by Louis, and is supported by private donations.. The program recruits one student from a developing country each year to receive a graduate degree in Systems Engineering, specializing in environmental systems (water supply, wastewater treatment and solid waste management). The student returns to work in the water and sanitation sector of their home country upon graduation.

Founding Faculty Advisor, Engineering Students Without Borders at UVA (2003-Present). As part of this program Louis coordinates the design, funding, and implementation of water and sanitation projects by UVA students in developing countries.

Collaborators & Other Affiliations

***Collaborators and Co-Editors*:** B. Amadei (U. Colorado – Boulder), M. Gorman (UVA), A. Pinto (Old Dominion U.), J. Rogers (RIT), A. Smith (MIT), J-S Shih (Resources for the Future), J. Shatkin (CLF Ventures), V. Netshandama (U.Venda), A. Amekudzi, (Georgia Tech), W. Ball (Johns-Hopkins).

***Graduate Advisors and Postdoctoral Sponsors*:** Yaman Arkun, RPI (M.Sc. Advisor); F. McMichael, M. Granger Morgan, Sue McNeil, Otto Davis; Carnegie Mellon, (PhD. Advisors); Indira Nair, Lester Lave, Chris. Hendrickson, Carnegie Mellon (Postdoc advisors).

Thesis Advisor: N. Agrawal (Smith Barney Inc.), T. Ahmad (AMS), K. Anderson (Wachovia), Y. Baki (Cameroon), A.Bouabid (UVA), A. Castillo (UVA), E. Fauss (UVA), M. Greenberg (CDM), P.Guilbaud (Virginia Tech), J. Henriques (UVA), A. Mardikanto (UVA), M. Siriwardana (Bechtel), B. Yamakoshi (UVA), A. Wardak (UVA), V. Williams (UVA) & more

***Postdoctoral Sponsor*:** Luna Magpili (Old Dominion U.), Jeff Rogers (JWR Engineering)